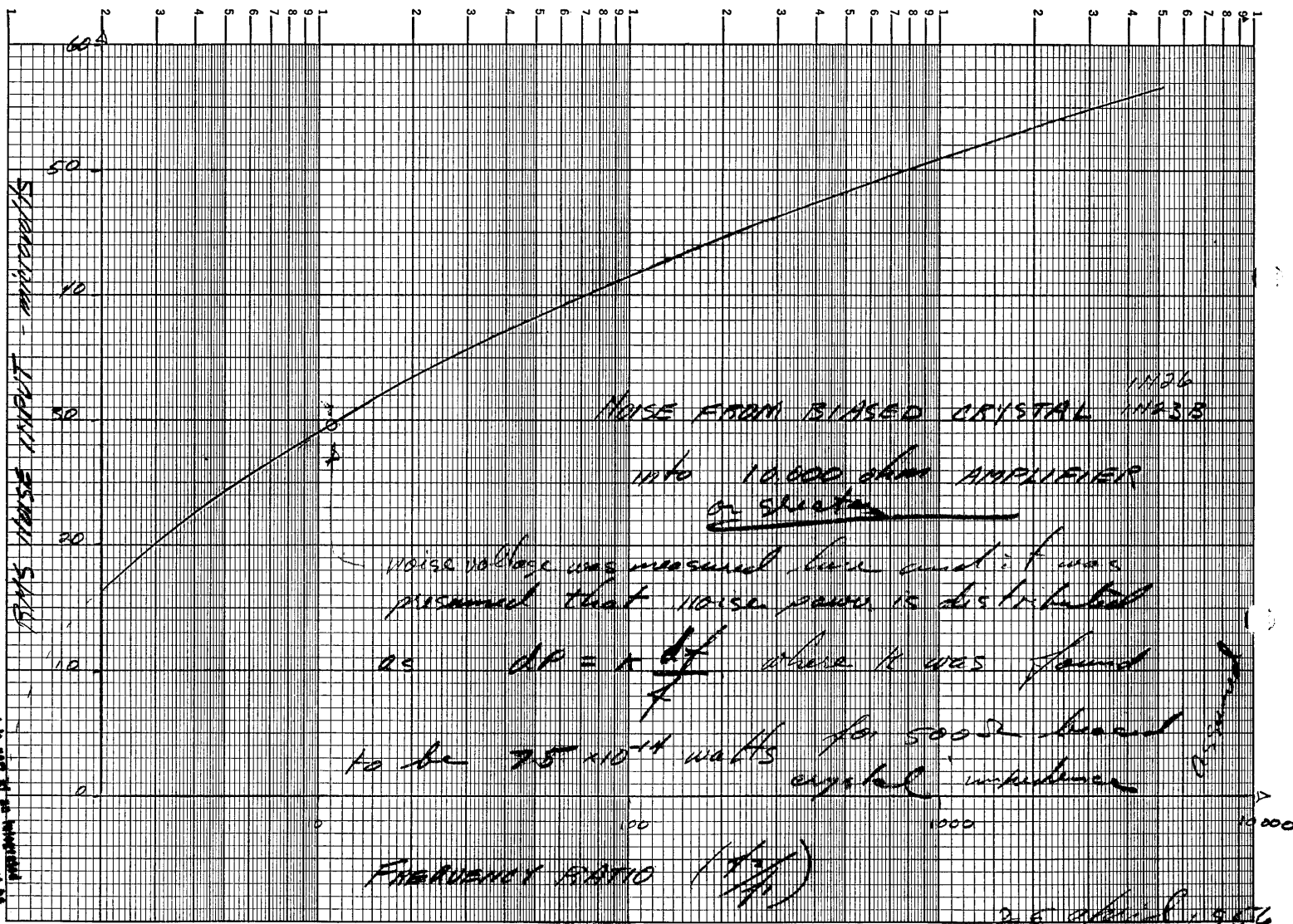


semi-logarithmic, 4 cycles x 10 to the inch.
5th lines accented.
MADE IN U.S.A.



Noise power = ~~$k T \Delta f$~~

$$dP = \frac{k df}{f}$$

$$P = k \int_{f_1}^{f_2} \frac{df}{f}$$

$$P = k \ln \frac{f_2}{f_1}$$

$E = \sqrt{P \cdot R}$ — crystal impedance w/ wire
 if crystal impedance is ~~substituted~~

$$= \sqrt{R k \ln \frac{f_2}{f_1}}$$

$$k = \frac{E^2}{R} \left(\ln \frac{f_2}{f_1} \right)^{-1}$$

$$E = \sqrt{R k \ln \frac{f_2}{f_1}}$$

$$\frac{f_2}{f_1} = \frac{132}{12} = 11$$

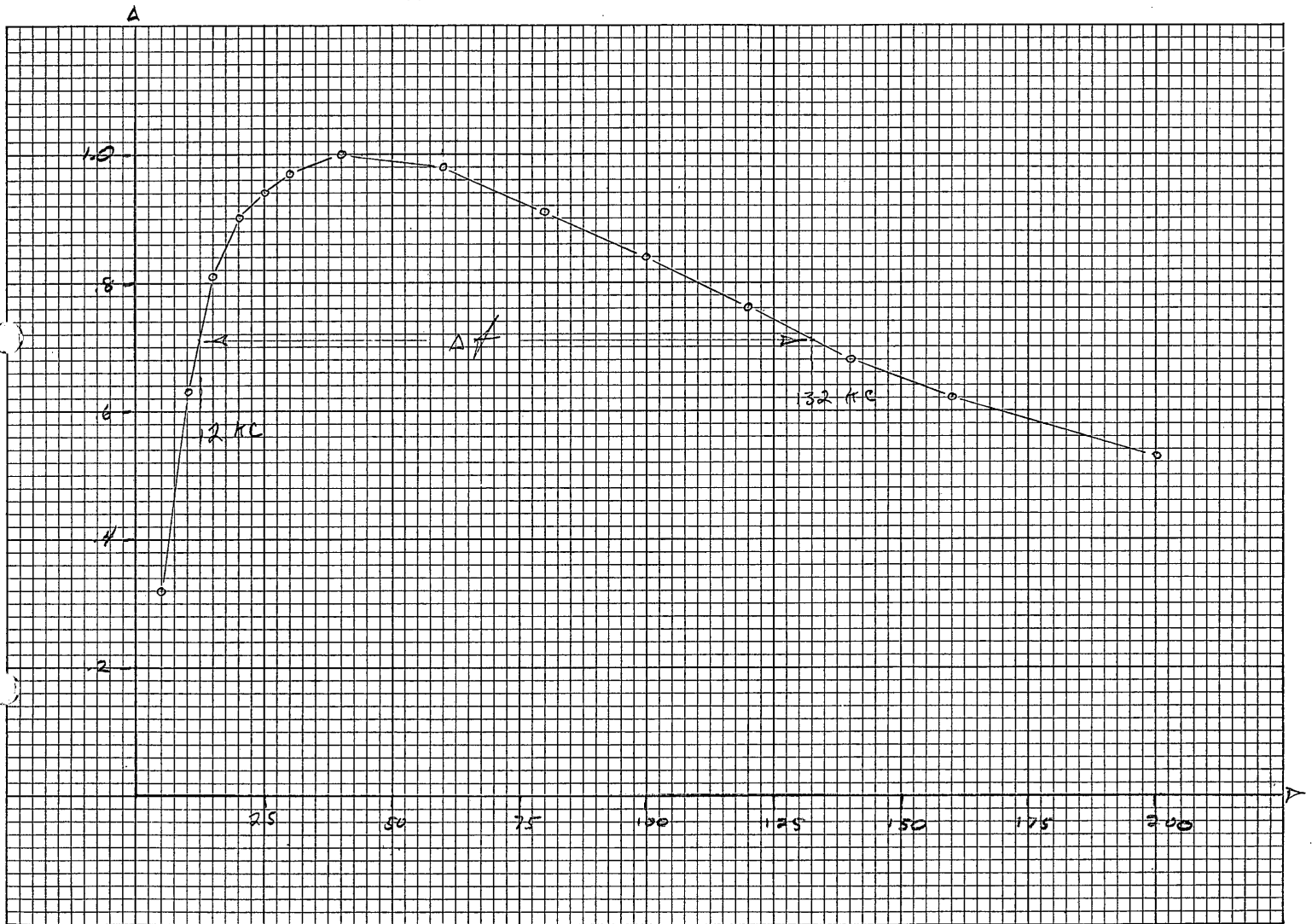
$$\ln(11) = 2.4$$

$$P = \frac{(30)^2 \times 10^{-12}}{2.4} = \frac{900}{2.4} \times 10^{-16}$$

$$P = \frac{500}{3.75} \times 10^{-14} \text{ watts}$$

$$= 75 \times 10^{-14}$$

$$\begin{array}{r} 375 \\ 2 \\ \hline 750 \end{array}$$



Transistor video amp

$$\frac{f_2}{f_1} = \frac{200 \text{ kc}}{2 \text{ kc}} = 100$$

$$h(100) = 4.6$$

$$E = \sqrt{3.75 \times 10^{-14} \times 10^4 \times 4.6}$$

$$= 10^{-5} \times 4.75$$

$$= 42 \mu \text{volts}$$

$$\text{Say } \frac{f_2}{f_1} = 1000$$

$$h(1000) = 6.9$$

$$E = 31 \mu \text{volts}$$

7-1/1

10	29.0
20	33.5
150	38.2
100	41.5
200	44.5
500	48.2
1000	51
2000	53.4
5000	56.5